U. S. DEPARTMENT OF COMMERCE

BUREAU OF FISHERIES

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SOME UNUSUAL MARKETS FOR FISH AND SHELLFISH [1]

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INTRODUCTION

The interest which has been manifested in several comparatively obscure or undeveloped fields for the distribution and consumption of fish and shellfish has indicated the desirability of assembling data on the operation of these widely varying enterprises not only for the information of those now engaged in these activities but for those who may be contemplating similar activities.

The unusual methods which are described in this paper should be of interest not only to those engaged in the marketing of fish and shellfish but also to consumers and potential consumers.

Commercial sport-fishing establishments are unknown in many States and nowhere are they common, but it is significant that there has been a considerable recent growth in enterprises of this type and others are under construction or are contemplated.

The highly specialized restaurants known as fish and chip shops in Great Britain, wherein it is estimated that nearly 70 per cent of the country's catch of fish are marketed, are found but rarely in this country, although the domestic exploitation of a trade of this type seems to have good possibilities.

Clam bakes and oyster roasts are old American institutions, but their methods are not generally known.

COMMERCIAL SPORT FISHING IN PRIVATELY STOCKED WATERS

For the sport fisherman who makes his "catch" at a retail fish market after an all day's fruitless trudge along some fishless stream, there is developing an industry which offers better justification for

[1] This paper has been prepared under the general authority of sec. 744 of title 16 of the U. S. Code which provides that "The Commissioner of Fisheries shall prosecute investigations and inquiries * * *. Said investigations and experiments shall be such as to develop the best and cheapest means of taking such fishes and aquatic animals, of utilizing them for economic purposes, especially for food and to encourage the establishment of fisheries and markets for them." Approved for publication Feb. 23, 1932.

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his tales of prowess. Clubs which maintain stocked ponds, lakes, or streams for the recreation of their members have long been in existence; and it has been the practice of certain domestic-private hatcheries for some years to permit the taking of adult fish from their ponds upon the payment of specified fees. However, only recently has there been an extensive increase in the number of commercial enterprises of this type.

On account of the interest manifested in commercial sport fishing by hatchery operators, tentative municipal pool operators, manufacturers of fishing tackle, and anglers, the bureau circulated questionnaires among sport-fishing and hatchery firms believed to be interested in commercial sport-fishing pools to learn the scope of the industry and its place in our industrial structure, the data being requested for the fiscal year ended September 30, 1931. As a result of this survey data were obtained from 40 firms that operated commercial sport-fishing waters. It is believed that this covers at least 80 per cent of such firms in the United States. The following data are based on the reports from the 40 firms that reported.

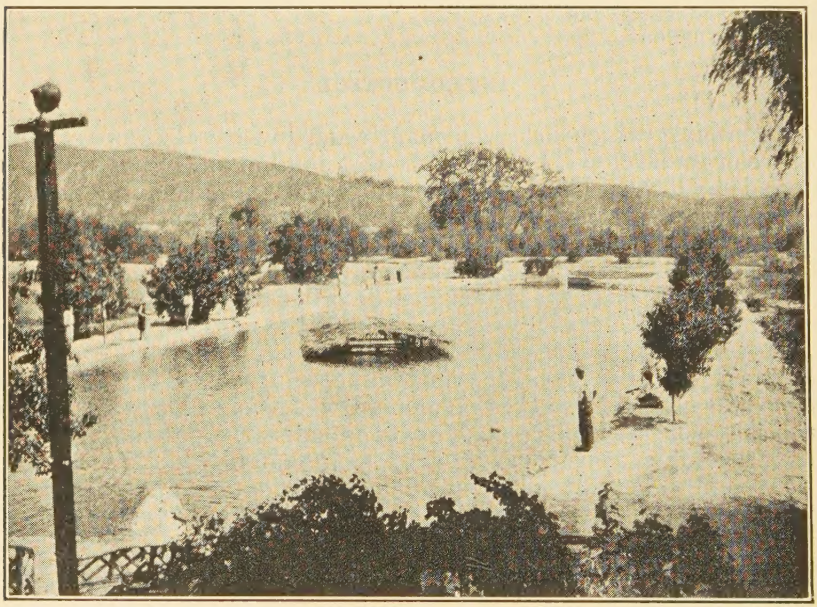

FIGURE 1.—A sport fishing pool. (Courtesy of Wildwood Trout Resort, San Fernando, Calif.)

Location of the industry.—Commercial sport-fishing activities at the time of the survey were concentrated chiefly in Colorado, Washington, and California, where trout fishing has long been one of the more favored recreations. Of the 40 concerns engaged in the business, 12 were in Colorado, 7 in Washington, 6 in California, 3 in Pennsylvania, 2 each in Utah, Montana, Nebraska, and New York, and 1 each in Idaho, Oregon, Massachusetts, and Wisconsin.

In addition to those places already in operation 19 hatchery firms and others indicated their intentions to open commercial pools. Some of these pools are already under construction. These tentative com-

mercial pools were distributed as follows: 3 each in Colorado and Massachusetts; 2 each in California, Montana, Oregon, and Wisconsin; and 1 each in Nebraska, Minnesota, Missouri, Connecticut, and Rhode Island. No doubt there will be many other commercial pools opened during the next summer, since tentative future operations of sport fishing were not covered in the questionnaire, and those who reported this phase did so arbitrarily.

That this business is of comparatively recent origin is indicated by the fact that prior to 1927 probably not more than 12 firms were in this business. Eleven more started operations during the biennial period of 1927 and 1928, 7 during the period 1929 and 1930, and 8 in 1931.

Most of the sport-fishing waters are operated by hatchery firms, although some operate independently as sport-fishing establishments. Several of the latter type were operated during the summer of 1931 in city and suburban locations, and they promised to supplant in a considerable measure the popularity of the miniature golf courses; in fact in a few cases the sites formerly occupied by golf courses were reconstructed into sport-fishing pools.

Personnel, wages, and investment.—On the basis of the reports received from the 40 firms, there were 89 proprietors and wage earners employed in sport fishing during the period covered. The wage earners, numbering about 40 people, received $47,318 in wages.

A feature of the maintenance of commercial sport-fishing waters is the small amount of personnel required to operate them; in fact, in many cases the entire operation of the establishment is effected by the owner or himself and his family.

TABLE 1.—*Personnel, wages, and investment in commercial sport-fishing industry*

Items	Colorado	Washington	California	Other States west of the Mississippi River	States east of the Mississippi River	Total, United States
Commercial sport-fishing concerns reported	12	7	6	8	7	40
Persons employed	31	11	14	14	19	89
Wages paid	$11,250	$5,099	$6,275	$6,970	$17,724	$47,318
Investment in sport-fishing waters [1]	45,050	20,025	20,350	812	6,500	92,737
Investment in sport-fishing waters and in hatcheries owned by sport-fishing water operators	149,500	69,675	67,300	105,562	142,668	534,705

[1] It was not possible for reporting concerns to separately enumerate the investment in sport-fishing waters in each instance. The concerns included in these figures consist of 21 firms, 7 of which were in Colorado, 4 in Washington, 5 in California, 2 in other States west of the Mississippi River, and 3 in States east of the Mississippi River.

NOTE.—It should be noted that the data presented in this table represent only those firms which have reported. It is known that some others operated who did not report.

The total investment in sport-fishing waters and in hatcheries operated by sport-fishing concerns was reported at $534,705.

The investment in the individual concerns varied greatly. Frequently, where the sport-fishing waters were operated in connection with a fish hatchery, the two phases were so closely associated that it was impossible for the companies reporting to make separate enumeration in their returns.

The investment in 21 sport-fishing establishments which could be shown separately amounted to $92,737.

Species used for stocking.—Rainbow trout and brook trout are the most popular fish for stocking commercial pools and waters, although in rare instances cutthroat trout, black bass, and bullheads have been used. The trout average about 8 to 12 inches in length, individuals varying from a minimum of about 7 inches to a maximum of about 24 inches.

Patronage.—On the basis of reports received, a total of 28,960 persons patronized commercial sport-fishing waters during the year. Of these, 10,147 were reported by concerns in Colorado, 6,600 in Washington, 5,923 in California, 2,900 in other States west of the Mississippi River, and 3,390 in States east of the Mississippi River.

Catch.—The catch of fish in commercial sport-fishing waters during the year was reported at 322,108 fish, which had an aggregate weight of about 99,369 pounds. It should be observed that many of the waters were first opened to the public during the year or were operated only during a short season, and that many of the firms operated commercial sport-fishing waters incidental to their hatchery operations; thus computations of average catches per firm do not present fair estimates of the business that may be expected where sport fishing is conducted as a primary enterprise.

TABLE 2.—*Extent of the commercial sport-fishing industry*

Items	Colorado	Washington	California	Other States west of the Mississippi River	States east of the Mississippi River	Total, United States
Commercial sport-fishing concerns reported—number	12	7	6	8	7	40
Persons fishing—do	10,147	6,600	5,923	2,900	3,390	28,960
Catch of fish—do	82,000	75,811	116,999	24,900	22,398	322,108
Catch of fish—pounds	29,530	21,737	30,470	9,570	8,062	99,369
Ponds first opened to commercial sport fishing:						
1931—number	3		2	2	1	8
1930—do	1					1
1929—do	1	3	1	1		6
1928—do		1		3		4
1927—do	3	1	1	1	1	7
1926—do	1					1
1925—do		1				1
1924—do	1	1			1	3
1923—do	1					1
Prior to 1923—do	1		1		3	5
Not specified—do			1	1	1	3

NOTE.—It should be noted that the data presented in this table represent only those firms which have reported. It is known that some others operated who did not report.

Season.—The season for commercial sport fishing varies according to the geographical location. In States climatically favored and not affected by State fishing laws, the waters may remain open throughout the year. Where climatic changes are more severe, or where there are legal restrictions, the season may extend only a few months.

Hours of trade intensity.—The busiest period of the day in the municipal pools which have artificial lighting is in the late evening, while fishing in natural waters or in those of the open country is

usually conducted most intensively in the early morning and late afternoon.

Fees and services.—Charges levied for sport fishing and services in connection with sport fishing vary greatly in amount and method. Generally, the patrons pay a flat charge per pound for fish taken which varies from 30 cents to $2; however, the customary charges range from 65 cents to $1. Sometimes the fee is stated as a charge per fish, varying from 10 to 40 cents each. In rare instances a uniform charge per day is made to fishermen, allowing them the privilege of taking any quantity of fish not exceeding the State limit. Fees may also be based on a flat rate until the catch has reached a certain maximum number of fish, whereupon an additional fee must be paid by the fisherman if he intends to continue to fish, and he is again restricted to a certain limit. Yet, in other instances, fishing privileges are accorded persons renting cottages or obtaining meals at certain mountain resorts. Municipal and suburban pools occasionally have fixed charges for spectators.

The wide variation in fees or charges for the same services may be accounted for by the fact that commercial sport-fishing activities cover a wide range geographically and are located in both city and country; thus, many factors determine the fee.

In most cases fishing tackle is furnished by the management without additional charge, although some concerns require a rental fee for their use. Some firms require that all tackle be furnished by the fishermen, and in some cases these firms are prepared to sell tackle.

Where the ponds are small, fishing is conducted from the banks. In the case of lakes of considerable size, boats are used. These may or may not be furnished without additional cost to the fisherman. Where charges are made they vary from about 50 cents an hour to 50 cents a day.

Many firms maintain facilities for cooking and serving the fishermen's catch. Picnic grounds are frequently provided where stoves, tables, dishes, and fuel are available. Sometimes fish are prepared in the home of the caretaker upon request. As a rule, no additional charge is made for this service. A cleaning and wrapping service is maintained by many firms for those fishermen wishing to take their catch home. With some this service is to wrap the fish in oil paper which in turn is placed in a carton. Others pack the fish in ice in baskets. The fish may be packed in water cress before wrapping to keep them cool and moist. Usually no charge is made for cleaning and packing.

Transportation of fish.—Transportation of fish to the fishing pools does not present a great problem to the operators who conduct their own hatcheries, since the sport-fishing ponds of these concerns usually are connected by gates with hatchery ponds, and isolation of any sizes of adults may be effected by herding from pond to pond. If the sport-fishing ponds are removed a short distance the adult fish may be transported in tubs or cans.

With the growth of sport fishing, however, it has been necessary to transport live adult fish considerable distances. Several operators report that shipments have been made satisfactorily by the use of cans holding 10 to 30 gallons of water. Ice may be applied directly in the cans or packed around them for cooling. Little loss

was reported by these methods for distances of 100 miles or more when the trips could be made quickly.

Long hauls are usually made in specially-constructed tanks mounted on motor trucks. They are equipped with a refrigerating unit, an oxygen tank, or a circulating pump, or a combination of the former device with either one of the latter two.

Water supply and construction of pools.—The waters supplying the lakes and ponds usually have their source in some mountain stream or spring and are naturally cooled. In the municipal and suburban pools the water may come from wells or the city hydrants and cooling be effected by some type of refrigeration at the inlet of the pool or by installation of refrigeration equipment throughout the bottom area of the pool. Such pools are usually aerated by injection of compressed air or by some sort of aerating motion induced by centrifugal pumps. Practically all of the pools have provision for continuous change of water at a high rate of replacement.

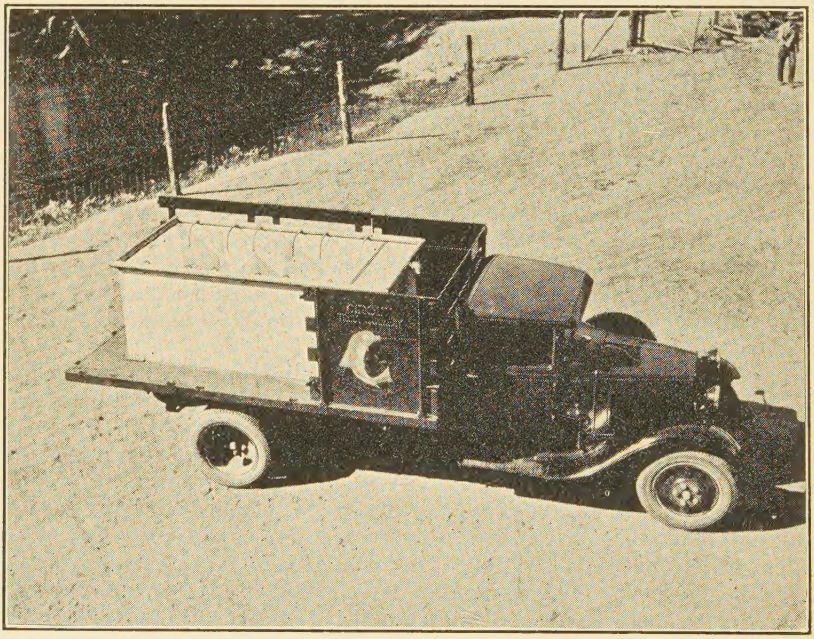

FIGURE 2.—Tank and truck used for transporting trout to sport fishing pools. (Courtesy of Giroux Trout Hatchery, Big Pine, Calif.)

There is considerable variation in construction since several types of bodies of water are utilized in this industry. Frequently, as stated previously, the sport-fishing pond is one of a series of hatchery ponds. A typical arrangement of such ponds is effected by the building of a dam in a stream to raise the water elevation, then diversion of the water from the lake thus formed through a series of ponds and back into the creek again. Gates are constructed between each pond to allow for draining and cleaning. Ponds or lakes are sometimes constructed by a series of dams in a stream bed, excavation being resorted to if advisable. In some instances the natural stream is stocked. Frequently pools are of cement or with cement sides. They may be

faced with overhanging rocks to provide shade and protection for the fish.

Maintenance.—Among the firms reporting 28 hatched and reared their own sport fish, 5 bought the eggs or fry and reared them to adults, and 5 bought adult fish. Two firms did not indicate the source of their stock.

Many of the waters have sufficient natural food for their fish. Where feeding is necessary it is customary to feed only a sufficient amount to insure the health of the fish since they must be hungry enough to bite well. Infrequently the operators gather insects which they place in their ponds for feeding purposes. These operators state that the insects multiply rapidly and augment greatly the natural food. A considerable supply of insects is also attracted by the lights used in night fishing.

Discussion.—A phase of commercial sport fishing which has been a deterrent to some potential operators has been the belief that a large percentage of the fish will be killed through mutilation by the more inexperienced fishermen. In this connection it is interesting to observe that reporting firms have usually stated that they have experienced a very small loss due to this cause. However, in several cases the losses mounted quite high. Some operators have required that barbless hooks be used to reduce the percentage of mutilation, and they report that this requisite has been successful to their purpose. It appears that some of the loss may be attributed to the stipulation of a fixed fee per fish or a certain number of fish, thus effecting an incentive to throw back small fish, even though they may be injured, in order that the fisherman may continue to angle for larger fish without paying an additional fee.

Commercial sport fishing has had a rapid growth recently. Indications point toward its further growth. It has been likened to that of miniature golf, but it is believed that it will endure a much greater longevity since some commercial sport-fishing enterprises have already been in operation for years and are apparently operating with success. Natural fishing is not as easily found as in earlier years, and there are many fishing enthusiasts.

It is true that a few of the pools recently opened have met with financial losses, but it is the opinion of those in the industry that if operation and supply of fish are studied to avoid excessive cost, and if attractive and easily accessible localities are selected, these enterprises may be expected to be successful.

HOT-FISH SHOPS

History of hot-fish shops.—It has been estimated that in 1861 the hot-fish shops of Great Britain gave employment to barely 300 people. The industry has grown to the point where to-day it employs in excess of 100,000 people, either directly or indirectly, in some 30,000 shops dispersed throughout the country, and it absorbs nearly 70 per cent of the fish landed in the country, or some 1,050,000,000 fish.[2] The smallest city in Great Britain is not without its shop.

[2] "Die Fischbratkuche" Cuxhaven, 1926, published by the Institute für Hochseefisherei Wesermunde, and the "Fish Trade Gazette," Dec. 26, 1931, p. 49.

The closest semblance to this flourishing industry which has developed in the United States is the hot-fish shop business of St. Louis.

It was about 15 years ago in East St. Louis that the first shop was established which sold hot fish exclusively. This was a shop of diminutive proportions where an enterprising lunch-room proprietor initiated an experiment that has resulted in the establishment of hundreds of hot-fish shops in the greater St. Louis area. There are probably 300 or 400 now operating in this vicinity and several hundred more within a radius of 75 miles of St. Louis.

Numerous species of fish were used in the early days of fish-frying operations in St. Louis. Catfish, buffalofish, perch, sunfish, and blue pike have all been used at different times; but it was not until about a decade ago that a wholesale fish firm in St. Louis introduced the whiting—a fish whose physical attributes and constant supply have made it possible to establish a lasting appeal for fried fish. Following the introduction of this fish, its acceptance was comparatively rapid.

Source of raw material.—Overshadowed by the more prolific and historical deep-sea fisheries and shellfish industries, the whiting or silver hake of the North Atlantic coast has received but little general public attention. Yet the annual catch of this species from Delaware to Maine, which expanse constitutes their maximum range of commercial importance, averages no less than 17,000,000 pounds—a quantity greater than the average annual yield of butterfish or of fresh-water catfish, a yield almost equivalent to that of buffalofish, approximately one-half that of croaker or of squeteague (sea trout), or about one-fourth that of flounders.

The capture of whiting in the vicinity of Cape Cod, Mass., and Monmouth and Ocean Counties, N. J., has been particularly successful since they abound in the coastal waters and fall easy prey to the pound nets jutting out at frequent intervals from the shores of these regions.

It is indeed interesting to observe that the ambition and industry of a few individuals have made possible the distribution of more than one-fourth of the total supply of this fish in a single city, some 600 or 700 miles from the source of supply.

Whiting as a sandwich fish.—The whiting is admirably suited to the hot-fish shop trade because of its uniformity of size, flesh that is easily removed from the bone, delicious flavor, and its plump oval body, rather long for its size and gracefully tapering, which gives it a pleasing appearance.

Whiting intended for the St. Louis trade are frozen shortly after capture near the fishing centers and generally are shipped to the St. Louis markets in carload lots. Some are beheaded, eviscerated, and skinned before shipping from eastern points, but as frequently they are received in the round. St. Louis wholesale receiving firms maintain crews for performing the cleaning functions, since all fish are delivered to the hot-fish shops ready for frying.

The hot-fish product.—The typical hot-fish product sold in the St. Louis hot-fish shops is a dressed whiting weighing approximately one-third of a pound, rolled in cracker meal or corn meal and fried in some commercial edible oil from 6 to 10 minutes at a temperature

of from 400° to 410° F. (In earlier years ordinary lard was used, and the time for cooking was somewhat longer.) A supply of fish is usually fried and kept on a steam table for ready use. The cooked fish served with two slices of white or rye bread is known as a fish sandwich and commands the almost universal price of 15 cents per order. There is considerable variation in the serving of fried whiting, however. In some cases potato chips may be served or crackers instead of bread, and again whiting may be the fish portion of a plate lunch.

Location of shops.—Most of the shops are located on the main highways where they are convenient to motor traffic, as the greater share of the trade is drawn from tourists or pleasure parties. However, where the locations are suitable a considerable business in the

FIGURE 3.—Skinned whiting boxed for delivery to hot fish shops. (Courtesy of Meletio Sea Food Co., St. Louis, Mo.)

lunch trade of office workers and laborers has been found, and in the city restaurant customers patronize the plate-lunch product. The smaller shops have room for little more than cooking equipment and customers eat while standing or sitting in their automobiles. The larger establishments are capable of seating 30 to 50 or more people. They vary, in variety of commodities handled, from exclusive fish shops to establishments where complete restaurant lines are carried. Quite frequently the city fish stands handle oysters, other sea foods, and frog legs. Many of the smaller establishments operate only in the summer months since they have no provision for protecting their customers from the weather.

Consumption.—The consumption of the various hot-fish shops varies greatly, depending upon their location, their accommodations,

their period of establishment, the attractiveness of their appearance, and the ability and resourcefulness of their managers. From a few pounds per week, the consumption reaches 3,000 pounds in the more favorably situated sites.

Sales trends.—Sales of hot fish during the last several years have decreased to some extent, probably due to the general tightening of purse strings and consequent decrease in tourist and pleasure travel, but the number of shops operating remains surprisingly near equal to the number in better times. Some places have changed hands, but very few have been discontinued.

Discussion.—A great deal of the credit for popularizing whiting and the hot-fish shops is due the wholesale fish dealers of St. Louis. They have been active in newspaper advertising, and in the distribution of circulars and signs for their customers' shops. Their tireless efforts and the efforts of the pioneer shops have been responsible for the successful distribution of this North Atlantic fish which is little known in other communities so far from its source.

There have been attempts toward the establishment of hot-fish shops in other cities of the United States, but never on as extensive a scale as in the vicinity of St. Louis.

We wonder if these St. Louis pioneers have furnished the nucleus of a domestic retail fish business similar to that in England, and no less extensive than our own "hot dog," barbecue, and hamburger shops and stands. Certainly they have done much to create a consumer demand that will react favorably in other cities where similar establishments may be opened.

CLAM BAKES AND OYSTER ROASTS[3]

Unique but by no means new channels for the distribution of clams and oysters are the clam bakes and oyster roasts prevalent in many districts of our coastal areas.

At intervals along the coast there yet remain the shell heaps which are deposits of unknown centuries by our aboriginal predecessors, presenting ample evidence of the early popularity of our native mollusks. Many Indians, no doubt, spent the entire year at the seashore, but the more frequent custom was to gather there in the summer and fall as a festival occasion and to feast on clams or oysters and green maize roasted together.

This custom, with certain qualifications, was borrowed from the Indians by the Puritans, who conducted clam bakes as community-wide holidays. The modern clam bakes, though usually confined to certain groups, are yet celebrated much after the traditional fashion.

Clam bakes.—Clam bakes are conducted on both coasts of the United States periodically by groups varying in size from families or groups of friends to the entire personnel of civic organizations or commercial companies. Some organizations which are situated in favorable regions frequently conduct annual clam bakes as festive occasions.

A clam bake held in New England recently, and which accommodated approximately 650 people, may be selected to cite the methods and general procedure of one of these functions.

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[3] An expression of appreciation is extended to H. E. Timmis and V. J. Samson, agents of the Bureau of Fisheries, who collected most of the material used in the discussion of clam bakes and oyster roasts.

The provisions for this bake included 650 lobsters (1 pound in weight or larger), 20 bushels of soft clams, 5 bushels of sweetpotatoes, 5 bushels of white potatoes, 3 bushels of onions, 1,500 ears of corn, 180 pounds of frankfurters, 1,500 rolls, 20 pounds of coffee, and 50 pounds of sugar.

A trench was dug in the sand about 10 inches deep, 10 feet long, and 5 feet wide. The trench was then lined with flat rocks on the bottom and sides. A small quantity of light kindling wood was then placed in the trench and on this a layer of large logs of some hard wood such as hickory or birch laid lengthwise and another layer laid crosswise, considerable space being allowed between the logs. In the crevices formed by these spaces were placed additional rocks. The kindling was then lighted, which ignited the logs and the entire fuel was allowed to burn until the embers fell into a flat heap. The rocks were then evenly distributed within the trench and a layer of rockweed about a foot deep thrown over the rocks.

Directly over the rockweed was placed a layer of clams, followed by a layer of sweetpotatoes, then a layer of white potatoes and onions, a layer of frankfurters, a layer of corn, and last a layer of lobsters. A light-weight canvas was then spread over the provisions and more rockweed piled on top. A heavy canvas then was thrown over this to prevent the escapement of heat and steam. After a period of an hour the food was ready to serve.

A V-shaped serving table was erected near the bake. Within the angle thus formed 20 persons worked in serving the food to lines of people approaching along the two sides of the table.

A tray, four paper plates, and one paper cup were furnished each of the guests. At the first serving each guest received 1 lobster, 1 quart of clams, 1 sweetpotato, 1 onion, 1 ear of corn, 3 frankfurters, 2 rolls, and a cup of coffee. A second helping included as much as desired of every item of food available, with the exception of lobsters. After this bake there was enough food left, with the exception of lobsters, to have supplied approximately 150 additional people.

Clam bakes frequently include such foods as chicken, mackerel, codfish, hard clams, and crabs.

Where organizations hold clam bakes a frequent custom is to have the food prepared by experienced parties to whom payment is made on the basis of persons fed. A charge of $2 per person was made at the bake referred to above. The price varies depending on the location and provisions selected.

Oyster roasts.—Oyster roasts are common along the Middle Atlantic and South Atlantic coasts of the United States. At times oysters are included in the foods prepared at a clam bake if they are easily available.

In the lower Chesapeake region soft clams are not easily obtained and oysters form not only the sea-food portion of the functions known there as oyster roasts but also virtually the entire menu. The typical roasts of this region are conducted by parties experienced in these functions and are held at fixed points where certain required equipment has been permanently constructed. Such equipment consists of a brick oven with a steel plate top probably 3 feet wide and 8 feet long. The oysters, in the shell, are spread on this plate and roasted from 10 to 15 minutes, or until the shell starts to open. The meats are then removed and placed in small pans which hold

about 2 dozen oysters. The roasted oyster meats are served in this pan along with a bowl of melted butter, oyster crackers, and salt and pepper.

At one point near Norfolk a single operator with roasting equipment is said to have served from four to five organizations per week throughout the winter months. The average attendance is about 50 people. This establishment also serves oysters prepared according to any other method desired, such as stewed, raw on the half shell, and fried; however, roasted oysters are by far the most popular.

Frequently oyster roasts are held in the open, the roasting being effected on a wire screen or a piece of sheet metal over a fire built on the ground. Oysters may also be baked in an ordinary oven with practically the same effect as roasting.

Sometimes frankfurters and pigs are also roasted. Such other foods as rolls, bread, crackers, pickles, olives, cheese, ham, celery, and salads of various kinds and possibly coffee may also be served.

Steamed oysters are frequently served at oyster roasts. Either steam chests are used for this purpose or a hose is extended from a boiler into a container of oysters which has been covered with canvas or other cloth to prevent the escape of the steam.

OYSTER SUPPERS

Oyster suppers have long been held by fraternal, church, and other organizations in this country, especially those in the Middle Western communities. At these suppers oysters are generally served in a milk stew and other foods may or may not be served in conjunction. They are either prepared and served by restaurants or hotels, or in church or club kitchens by the members and served in adjoining dining rooms.

FISH FRYS AND MISCELLANEOUS

In inland rural communities or other localities where fish have not been established so regularly in the dietary as in coastal towns and cities, there have already appeared instances where towns have celebrated annual home-coming events with fish frys at which there have been attendances in excess of 5,000 people.[4] These events are celebrated in the open, the fish being cooked on large sheet-iron pans directly over open fires. Usually inland rural communities are very favorable toward community gatherings and may be expected to be thoroughly in accord with an opportunity to leave their routine work for an occasional function of this type.

Shad bakes are conducted in many areas where these highly prized fish are taken. The most frequently adopted method in preparing baked shad is to split the fish, nail them on a plank and force the heat from a partially closed fire on to the fish. At frequent intervals while being baked the shad are basted with a sauce to keep them moist.

Among other novel methods in sea-food distribution now more or less actively prosecuted several may be cited. Lobster pound operators who are conveniently accessible to tourist and general automo-

[4] Fishing Gazette, October, 1929, p. 33, vol. 46, No. 11.

bile traffic have established a service permitting those wishing this sea-food delicacy to choose their own lobsters from the pound, have them boiled, and then eat them in adjoining picnic grounds.[5] Restaurants, which have for years displayed live crabs and lobsters for their customers' selection, if desired, have now added aquaria where customers may select their own live fish and a few minutes later consume it. At some points live crabs are boiled at retail stands on the wharf shortly after their capture, the meat picked out, and by the addition of a sauce, converted into cocktails.[6]

GENERAL DISCUSSION

The widespread popularity of the fish and chip shops of England, wherein it is estimated that 70 per cent of the country's production of fish are consumed, has been pointed out. Municipal-sport fishing as an industry is yet in its infancy, and its success in individual cases will require careful planning and selection of suitable locations, but those in the industry believe in its possibilities. The mediums of shellfish bakes and roasts have already proved successful in various regions, but it seems that there is room for their further development.

A study of these unusual channels for the distribution of fish and shellfish leads one to believe that those interested in the sale of these products may be overlooking opportunities for developing new markets for their supply—markets that through their very uniqueness and novel interest, offer great possibilities for exploitation.

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[5] Fishing Gazette, November, 1931, p. 22, vol. 48, No. 12.
[6] Bureau of Fisheries Document No. 1087, Review of the fisheries of California, by R. H. Fiedler, p. 365.

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